

## LIMITING SPAN CHARTS

DESIGN PRESSURE (PSF)	MAXIMUM ALLOWABLE SPAN (IN) TO WOOD SUBSTRATE															
	AVERAGE MULLION SPACING (IN)															
25	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126
30	38	45	52	60	68	76	84	92	100	108	116	124	132	140	148	156
35	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
40	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
45	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164
50	43	51	59	67	75	83	91	99	107	115	123	131	139	147	155	163
55	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
60	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161

IE. 48" WINDOW SPACING, WITH 30 PSF DESIGN PRESSURE CAN HAVE A MULLION SPAN 72"  
BOLD ITALICS IS GOVERNED BY CONNECTIONS

DESIGN PRESSURE (PSF)	MAXIMUM ALLOWABLE SPAN (IN) TO CONCRETE SUBSTRATE															
	AVERAGE MULLION SPACING (IN)															
25	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126
30	38	45	52	60	68	76	84	92	100	108	116	124	132	140	148	156
35	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
40	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
45	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164
50	43	51	59	67	75	83	91	99	107	115	123	131	139	147	155	163
55	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
60	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161

IE. 60" WINDOW SPACING, WITH 35 PSF DESIGN PRESSURE CAN HAVE A MULLION SPAN 96"  
BOLD ITALICS IS GOVERNED BY CONNECTIONS

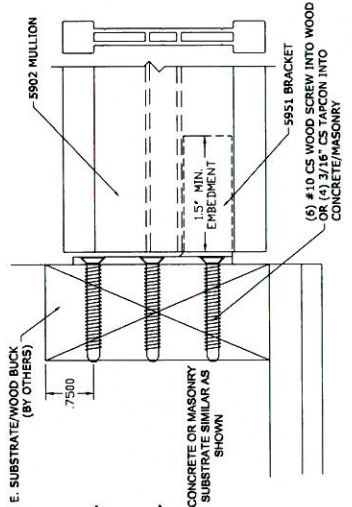
DESIGN PRESSURE (PSF)	MAXIMUM ALLOWABLE SPAN (IN) TO MASONRY SUBSTRATE															
	AVERAGE MULLION SPACING (IN)															
25	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126
30	38	45	52	60	68	76	84	92	100	108	116	124	132	140	148	156
35	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
40	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
45	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164
50	43	51	59	67	75	83	91	99	107	115	123	131	139	147	155	163
55	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162
60	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161

IE. 72" WINDOW SPACING, WITH 50 PSF DESIGN PRESSURE CAN HAVE A MULLION SPAN 144"  
BOLD ITALICS IS GOVERNED BY CONNECTIONS

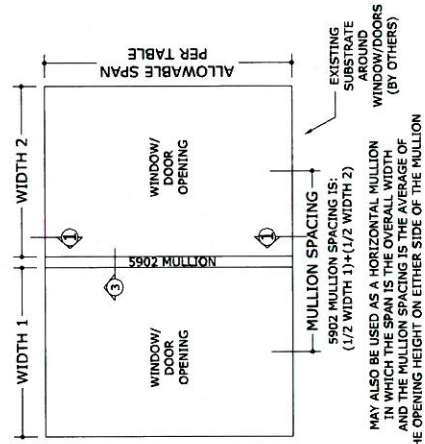
### FASTENER SCHEDULE:

INTO SUBSTRATE OF...  
WOOD: (6) #10 WOOD SCREWS OF SUFFICIENT LENGTH TO ACHIEVE A 1-1/2" MIN. EMBEDMENT, 3/4" MIN. END AND EDGE DISTANCE  
CONCRETE: (4) 3/16" TAPCONS OF SUFFICIENT LENGTH TO ACHIEVE A 1-1/2" MIN. EMBEDMENT, 1-1/8" MIN. EDGE DISTANCE  
CMU: (4) 3/16" TAPCONS OF SUFFICIENT LENGTH TO ACHIEVE A 1" MIN. EMBEDMENT, 1-1/8" MIN. EDGE DISTANCE

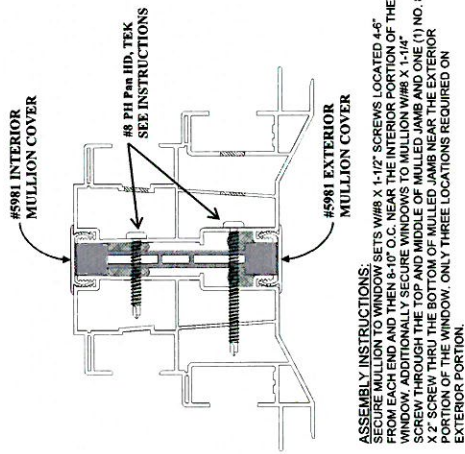
WHEN INSTALLING (4) TAPCONS THEY ARE TO BE INSTALLED IN EACH CORNER OF THE BRACKET - CENTER HOLES TO REMAIN UNUSED



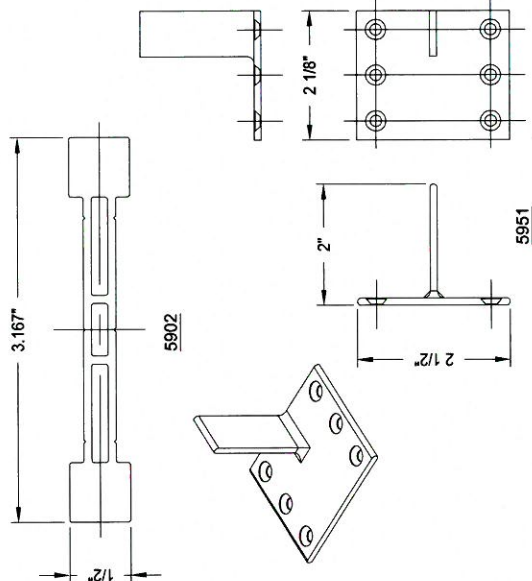
1 CONNECTION DETAIL  
NOT TO SCALE.



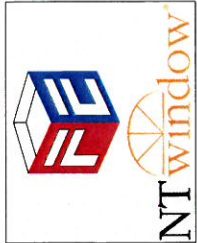
2 TYPICAL ELEVATION  
NOT TO SCALE.



3 WINDOW MULL CONNECTION  
NOT TO SCALE.



3 TYPICAL SECTIONS  
NOT TO SCALE.



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Revisions		Date	Project No.	Sheet Title
By: KGB	Checked: RW	02/22/17	1705015-1	MULLION DETAILS
By: KGB	Checked: RW			

Sheet No. **NT-2.0**  
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# 5902: 1/2" Structural Mullion

## 5951: Anchor Bracket

NT Window, Dallas, TX

### GENERAL

- 1.01 Design performed in accordance with the Aluminum Design Manual, 2010. The Aluminum Association.
  - 1.02 Dimensions shown in this shop drawing package are for design reference only. NT Window and FE do not assume any responsibility for the adequacy of the primary structure and foundation design. Contents of this drawing package show the intended application of components. Installer is to refer to the product suggested installation instructions for additional construction assembly requirements.
  - 1.03 NT Window and FE do not assume any responsibility for the adequacy of the primary structure and foundation design. Contents of this drawing package show the intended application of components. Installer is to refer to the product suggested installation instructions for additional construction assembly requirements.
  - 1.04 Precautions must be taken to avoid construction loads exceeding design live loads. Construction loads have not been considered in these recommendations.
  - 1.05 NT Window and FE's recommendations are minimum requirements of AIA member and are adequate for the given loading conditions as specified in the Design Assumptions.
  - 1.06 NT Window and FE interprets all concrete to be at least 3000-psi, unless noted otherwise in this drawing package or in the accompanying calculation set.
  - 1.07 NT Window and FE are not responsible for verifying and coordinating the information between these drawings and other drawings used in conjunction with these drawings.
  - 1.08 The installer is responsible to locate aluminum members from disconnector details to prevent electrolysis, which includes the use of appropriate screws. Aluminum members in contact with uncoated concrete and pressure treated wood shall be protected with a paint or other dielectric separation in accordance with applicable code requirements.
- ### SUBSTRUCTURE
- 2.01 All substructures including but not limited to rough openings and framing shall be designed by others.
  - 2.02 Connection details shown on drawings indicate minimum requirements based on capacity of NT Window components. The actual connections to substructure shall be designed by others.
- ### EXISTING STRUCTURES
- 3.01 The capacity of the existing or new structure to resist all loads imposed by NT Window enclosure shall be evaluated by others.
  - 3.02 Connection details shown on drawings indicate minimum requirements based on capacity of NT Window components. The actual connections to substructure shall be designed by others.
- ### CONSTRUCTION SAFETY
- 4.01 These drawings do not contain necessary components for safety during construction.
  - 4.02 The structure is only stable in its completed state.
  - 4.03 Installer shall provide adequate temporary bracing, shoring, or other support of framing against wind, construction loads, and other temporary forces until no longer required for the support of the framing.

### DESIGN ASSUMPTIONS

Design Based on: IRC/IBC 2006 (ASCE 7-05)  
 Definition Criteria: Structural Aluminum = U175

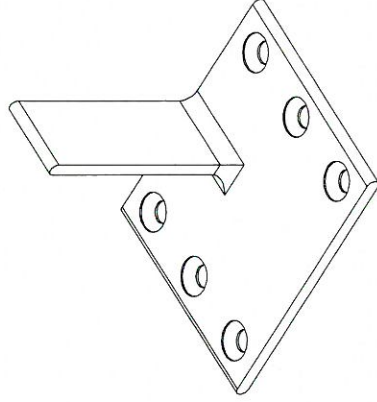


5902: Structural Mullion

- 6.01 STRUCTURAL STEEL  
All structural steel to conform to ASTM A36 or ASTM A572, Grade 50.
- 6.02 ALUMINUM  
All structural aluminum extrusions to conform to the minimum requirements of 6.03-7.5 alloy and temper.
- 6.03 WOOD  
Wood to substructure to be 0.42 minimum specific gravity.
- 6.04 CONCRETE  
Concrete to be 3000-psi minimum compressive strength.
- 6.05 CMU  
CMU to conform to the strength requirements of ASTM C-90 with medium weight block.
- 6.06 Other  
Walls and door assemblies have not been included herein and is beyond the scope of this table. To ensure a structurally sound structure these items must be properly designed per IBC or local building code amendments by a license professional engineer and installed per manufacturer instructions. Windows and doors in wind-borne debris regions must have impact rating where required by local jurisdiction.

### CONNECTIONS

- 7.01 All screw connections are based on BUILDEX manufacturing data. Alternate fasteners and adhesive anchor systems connections are based on literature published by Hilti Fastening Systems, Inc. Alternate manufacturer's fasteners of comparable specifications and load capacities are acceptable.
- 7.02 For screws 20 minimum clearance must be maintained from all edges of the aluminum members. A 1.50 minimum on center spacing must be maintained between adjacent screws.
- 7.03 Power driven fastener systems, expansion anchor systems, rebar/strut systems, and adhesive anchor systems connections are based on literature published by Hilti Fastening Systems, Inc. Alternate manufacturer's fasteners of comparable specifications and load capacities are acceptable.
- 7.04 All lag bolts shall conform to ASTM A36. All lag bolts shall have a minimum embedment of 8D. (D = diameter) in structural wood framing with SCS-0.55 minimum. Provide a pilot hole at 70% of the thread diameter of the bolt. Insert lag bolt in to pilot hole and turn to sit. Do not insert using a hammer drill or direct hammer to sit.
- 7.05 Framing design assumes all decking is uniformly laterally attached to each framing member and is limited to a uniform distribution of load to the framing member. The design does not include review of the effects of local forces resulting from the aluminum.
- 7.06 All window and door units are assumed to apply load to the surrounding metal framing uniformly unless differing information is provided.
- 7.07 Dift connection necessary to allow for primary structure movement is the responsibility of others.



5951: Anchor Bracket

### SHEET INDEX

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| NT-1.0 | GENERAL NOTES   |
| NT-2.0 | MULLION DETAILS |

### Revisions

Drawn:	Engineer:	Reviewed:
KGB	RW	RW
Date:	Project No.:	
02/22/17	1705015-1	

### GENERAL NOTES

Sheet No. NT-1.0

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